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AUTHOR Hill, Andrew
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ABSTRACT

Psychology education is examined as revealed by a study of science education that involved a review of the literature, an analysis of the catalogs and class schedules of 175 representative institutions, and a survey of 143 psychology instructors. Each of the four parts of the report reviews pertinent literature, reports study methodology and findings, and discusses trends and implications. Part I outlines trends in psychology curricula since 1950 and analyzes study findings as they relate to course offerings in ten disciplinary areas: elementary, general, develcpmental, abnormal, social-industrial, personality and psychology of adjustment, experimental, educational, contemporary issues, and physiological. Enrollments, prerequisites, and distribution of courses by college region, governance, and size are also considered. Part II notes the predominance of the introductory course in psychology curricula at two-year colleges, discusses the need to define course goals, and presents catalog data illustrating the frequency of first courses, course enrollments by sex and a units/term breakdown by course. Part III explores instructional practices in psychology and presents instructor survey results relating to class format and activities, grading, and desired student outcomes. Part IV discusses psychology faculty, their status, and assistance available to them. Summary conclusions and recommendations, a bibliography, and the questionnaire are included. (JP)

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SCIENCE EDUCATION IN TWO-YEAR COLLEGES:

PSYCHOLOGY

by

Andrew Hill

February 1980

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University of California
Los Angeles 90024

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PREFACE

This monograph is one of a series of twelve publications dealing with the sciences in two-year colleges. These pieces are concerned with agriculture, biology, chemistry, earth and space sciences, economics, engineering, integrated social sciences and anthropology, integrated natural sciences, mathematics, physics, psychology, and sociology. Except for the monograph dealing with engineering transfer programs, each was written by staff associates of the Center for the Study of Community Colleges under a grant from the National Science Foundation (#SED 77-18477).

In addition to the primary author of this monograph, several people were involved in its execution. Andrew Hill and William Mooney were instrumental in developing some of the procedures used in gathering the data. Others involved in tabulating information were Miriam Beckwith, Jennifer Clark, William Cohen, Sandra Edwards, Jack Friedlander, and Cindy Issacson.

Field Research Corporation in San Francisco, under the direction of Eleanor Murray, did the computer runs in addition to printing the instructor survey employed in that portion of the project dealing with instructional practices. Bonnie Sanchez of the ERIC Clearinghouse for Junior Colleges and Janice Newmark, Administrative Coordinator of the Center for the Study of Community Colleges, prepared the materials for publication. Carmen Mathenge was responsible for manuscript typing. Jennifer Clark did the final compilation of the various bibliographies for each monograph.

Florence B. Brawer coordinated the writing activities and edited each of the pieces. Arthur M. Cohen was responsible for overseeing the entire project.

In addition to these people who provided so much input to the finalization of this product, we wish to thank Ann Fogel of Los Angeles City College who reviewed the manuscript and Ray Hannapel and Bill Aldridge of the National Science Foundation, who were project monitors.

Arthur M. Cohen
Project Director

Florence B. Brawer
Publications Coordinator

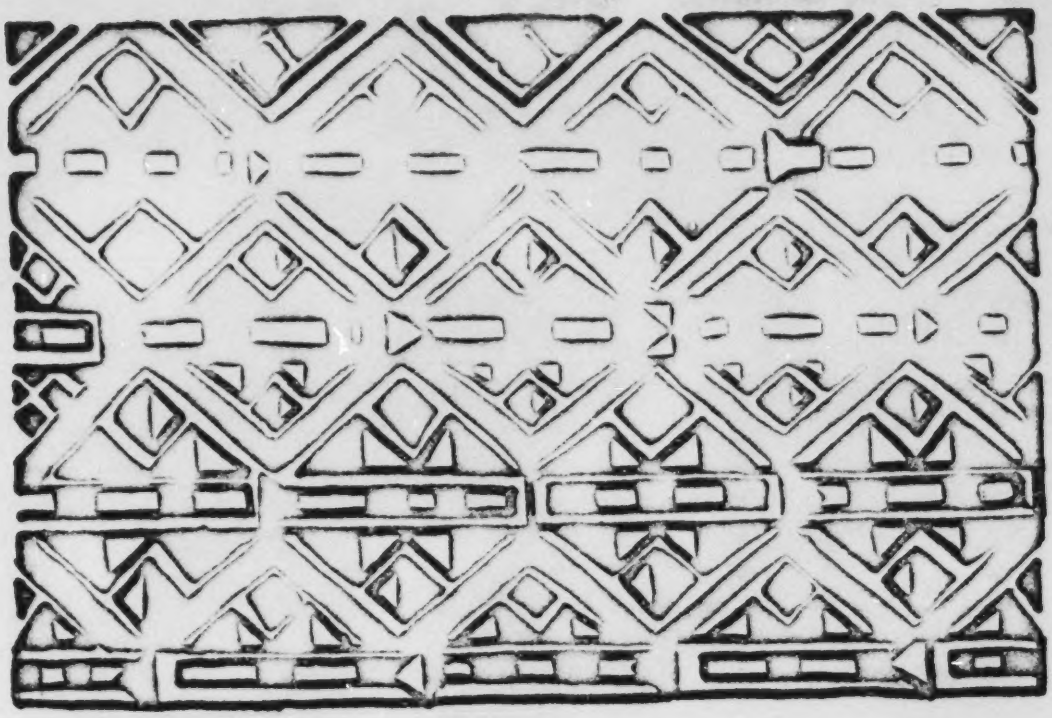
SCIENCE EDUCATION IN TWO-YEAR COLLEGES: PSYCHOLOGY

Two-year community and junior colleges enroll more than four million students, one-third of all students in American higher education. Current figures show that 40 percent of all first-time, full-time students are in two-year colleges. When the people beginning college as part-time students and those attending the two-year college concurrently with or subsequent to their enrolling in a senior institution are added to this number, the first-year students taking two-year college courses approximate two-thirds of all freshmen.

These students are enrolled in a wide range of courses--transfer, occupational, remedial, continuing education, community service, and terminal degree. And they come from all walks of life, different cultural and ethnic backgrounds, and represent a wide range of ages.

Despite this awareness of both the size and the diversity of two-year college students, many questions prevail. For example, how many of these students are enrolled in science courses? What are the most popular classes? Do courses vary in different types of institutions?

This monograph, one part of a National Science Foundation (NSF)-sponsored study of science education in America's community, junior, and technical colleges, answers these questions and poses areas for future investigation. It is concerned with the current state of psychology education in two-year colleges. The field will be broken into four areas: curriculum, the introductory course, instruction, and the faculty. Each section will review the pertinent literature, report methodology and findings of the Center for the Study of Community Colleges' study, and discuss trends and implications stemming from both the literature and the data. The final section presents an overall summary of the study findings as well as recommendations for the future of psychology in two-year colleges in the United States.



PART I
THE CURRICULUM

Psychology education has been a major concern of both psychologists and educators since the turn of the century. But when Wolfle et al. convened a national conference at Cornell University in the summer of 1952, it marked the first attempt at formulating some global recommendations for the undergraduate curricula. Following this landmark report, McKeachie and Milholland (1961) investigated the extent to which recommendations from the Wolfle conference had been implemented and made their own recommendations regarding the future composition and thrust of the undergraduate psychology curriculum. Yet both of these reports were undertaken from a four-year college, graduate education-oriented perspective. The issue of two-year college education in psychology received

little consideration until 1973. At that time, faced with an overall picture of higher education in which junior colleges accounted for a surprisingly large percentage of enrollments, Kulik, Brown, Vestewig and Wright (1973) gave equal consideration to the two-year college curriculum in their intensive investigation of undergraduate psychology.

Given the unique and changing character of the two-year college student population and its widely divergent attendance and course-taking patterns, it may have been inappropriate to try to implement the recommendations posited by Wolfle (1952) or McKeachie and Milholland (1961) on a psychology curriculum designed for a two-year college environment. Yet, given the dearth of any more appropriate curricular recommendations in the literature, one must assume that until 1973 these two conferences were the guiding light for two-year college curriculum planners.

THE LITERATURE

In comparing past studies of psychology curriculums, as well as in developing the procedures employed in the Center study reported in this monograph, the identification of legitimate "Psychology" courses immediately surfaces as a major problem. For example, in compiling a list of the 30 most frequently offered psychology courses, Sanford and Fleishman (1950) counted all psychology-related course titles, regardless of department, but did not take into account catalog descriptions. Daniel, Dunham and Morris (1965), on the other hand, used course titles, but confined their analysis to courses offered within psychology departments. Since two-year colleges do not always have a department of psychology, colleges offering psychology courses within a social sciences department, a child development program, or other departments idiosyncratic to the two-year college were not included in this study. This methodology was replicated in part by Lux and Daniel (1978); they, however, combined numerous course titles because they found that different colleges used a variety of course titles to describe the same course. And Kulik et al. (1973) tabulated course offerings based on questionnaire responses by psychology department chairpersons. They

asked the psychology chairperson to list all psychology courses, thereby avoiding investigator biases and substituting the biases of the individual respondents.

The difficulties in accurately tabulating courses are clearly seen in a study by Moses, Delaney, and Rubin (1971), who deplore the proliferation of course titles in psychology and call for greater uniformity in titling and description. Of particular interest is that these authors were only attempting to describe the psychology offerings in a single state; in a national study the magnitude of the problem is greater. It is clear that classification of courses is often subjective, arbitrary, and historically inconsistent. Because of the disparate methods used in collecting the data, one should be cautious in interpreting "trends" in curriculum.

Educational trends are best described by statistical surveys that compare past and present course offerings. Particularly within two-year colleges, which pride themselves on their ability to flow with the educational tide, descriptive studies of changing curriculum patterns can easily become self-fulfilling prophecies as colleges attempt to keep pace with curricular innovation. But the studies that have the most impact on trends in curriculum are prescriptive rather than descriptive studies. Conferences that have been held to determine the "approved" shape of the college curriculum and are attended by highly prestigious and respected university professors have certainly made an impression on psychology educators in all branches of higher education. Only recently have the two-year colleges been given separate attention.

A variety of recommendations have been made regarding the shape of the undergraduate psychology curriculum. Wolfle's (1952) orientation to the science of psychology is perhaps best understood by examining the reason for his exclusion of an "Experimental" psychology course in the psychology curriculum. The implication that some areas of psychology were set apart by their use of experimental methodology was abhorrent to Wolfle, who felt that scientific methodology must be present in all psychological work. At the heart of the Wolfle curriculum were four core content courses taken by all majors: perception, motivation, thinking

and language, and ability. He supported the notion of special interest courses for non-psychology majors who have completed the introductory course (e.g., educational, industrial), but strongly opposed the notion of psychological coursework that aims to improve the personal adjustment of students.

Wolfle's recommendation that departments of psychology eschew the interpersonal and personal adjustment orientation in their courses is more easily made than followed. The budgetary realities of most two-year colleges create an interdependence between enrollments and course offerings. Therefore, there is pressure to offer students what they want to learn about, not what the department would prescribe. Hawkins (1976) reveals that of all the possible areas of study in psychology, students were most interested in interpersonal relations. Anderson (1970) notes the consistency of student interests in psychology between 1951 and 1968; although student populations were ostensibly quite different in these two years, each group rated personality and adjustment as the areas in which they were most interested. Anderson also points out the consistency of students' interest (or lack of same) in nervous systems and glands; they were rated last in both years.

Perhaps the most accepted recommendation of the Wolfle conference was the call for a sequence of courses, to avoid unnecessary overlap amongst courses. The Wolfle curriculum also excluded all courses that concentrated on technology, a recommendation that has been ignored in many community colleges, where programs for mental health technicians are becoming more and more common (Korman, 1976).

The recommendations emanating from the Michigan Conference (McKeachie & Milholland, 1961) were less definitive and prescriptive than their predecessors. They agreed with the recommendation for a liberal education orientation towards psychology, and were particularly outspoken in their opposition to two-year "psych tech" curricula: "We strongly urge that they (two-year colleges) not accede to these requests; we regard four years of regular college work as a minimum prerequisite for undertaking any kind of work that can properly be called psychological" (p. 39).

They also recommended against specialized preprofessional courses (e.g., psychology of law, medical psychology), preferring broad-based knowledge of psychological principles to applied knowledge.

Perhaps most indicative of McKeachie and Milholland's recognition of the increasing heterogeneity of the educational system is that "Unlike the Cornell Conference (author's note: Wolfle), our group was unable to find one curriculum that we would recommend for all psychology departments" (p. 85). Instead of a single plan they proposed three model curricula: inverted pyramid, hourglass, and flexible. Detailed descriptions of the three curricula are not particularly relevant to this monograph, especially because they are all four-year programs. Yet some two-year colleges are prone to model their curriculum on freshman and sophomore components of the local four-year institution, so the bases are important.

The inverted pyramid includes a limited elementary course and a core content, a la Wolfle. Hourglass builds from a full-year introductory course. The flexible curriculum has as its underlying assumption "that the content of the curriculum should vary for students differing in abilities and interests and couples this with the assumption that the student himself can, with faculty counseling, choose the content best suited for his educational needs" (p. 97). All three curricula have gained some level of acceptance in two-year colleges.

The trend of curriculum recommendations continues from the definitively restrictive (Wolfle) to three proposed alternatives (McKeachie & Milholland) to a recognition of the need for many alternatives (Kulik et al., 1973). Kulik et al., by directing a portion of their study specifically towards two-year colleges, were able to prescribe more appropriate recommendations. They summarize, "The diverse goals of students in psychology courses suggest that pluralism may be a valuable concept in the design of programs in psychology" (p. 203). The basis for this conclusion is identified early in their work when they state, "Most students majoring in psychology do not intend to pursue careers as psychologists. Psychology programs that serve merely as foundations for graduate work

in psychology will generally not meet the needs of a large proportion of the students" (p. 21). The relevance of this statement is magnified in the two-year college, where most of the students never transfer to a four-year undergraduate program, let alone go on to graduate work.

Perhaps the most viable solution to the needs of the diverse community college population would be the use of competency-based modules. This recommendation was made at the 1973 American Psychological Association Conference in Vail, Colorado (Korman, 1976), and would appear to be a logical extension of Kulik's work--yet the idea does not appear to have been readily accepted.

Despite their reluctance to adopt modular formats to meet diverse student needs, community colleges have recently increased their efforts to meet local job market demands and students' interests by developing new programs for mental health technicians, and expanding programs in early childhood education. Psychological services, also referred to as mental health worker programs, have grown rapidly (Korman, 1976; Sheanin, 1972). Feldman (1976) points out that "The national focus of attention for the last ten years on Early Childhood education has led to a large increase in the number of students majoring in this field" (p. 1). The growth of these programs has certainly had an impact on course offerings in the community colleges, as the relationship between local job opportunities, student interests, and course offerings in two-year colleges would lead one to predict.

What does the literature tell us about the actual state of psychology education? In the National Science Foundation's 1969 report Junior College Teachers of Science, Engineering and Technology, 1967, it was reported that six percent of all science courses are psychology courses. Psychology course enrollments, according to Norton (1972) provide a substantial portion of the community college's credit hours (7.3% of school's total). This is partially attributable to the fact that "Almost without exception, every technical, occupational and business program includes it" (Norton, 1972, p. 445). For the 1968-69 academic year, the average total enrollment in psychology courses in two-year colleges was 629 (Kulik et al., 1973). There seems to be widespread agreement

regarding the popularity of psychology at least on the introductory level. Introductory psychology tends to be one of the most popular courses offered in the two-year college (Kirby, 1977).

In reviewing the overall curriculum, introductory psychology has always been most prevalent. While the following chapter will review the first course in detail, its predominant place in the curriculum must be noted. Introductory psychology was offered at 89 percent of the two-year colleges in 1947 (Sanford & Fleishman, 1950), and had expanded its popularity to 96 percent of the colleges in 1975 (Lux & Daniel, 1978). In light of the fact that only two other psychology courses were listed in over half the catalogs in 1975 (Lux & Daniel, 1978), the enormous popularity of introductory psychology is clear.

Looking at the curriculum in general, the trend in two-year college psychology seems to be toward a social science as opposed to a natural science orientation (Kulik et al., 1973; Lux & Daniel, 1978). This correlates highly with areas of student interest. As Anderson notes, "From the immediate post-World War II days to the present, the emphasis seems to have shifted rather strongly to more concern with personality, adjustment, motivation, emotion, social, and the more humanistic or person-centered areas" (1970, p. 632). There has been a tremendous proliferation in course titles, with title inflation going on at a 19 percent annual rate (Lux & Daniel, 1978).

In the early 1960s, community colleges were the only segment of the higher education system to show a decrease in the percentage of institutions offering the 30 most popular psychology courses (Daniel, Dunham & Morris, 1965). But by 1978 this trend was completely reversed, and community college psychology departments showed the most growth in their offerings (Lux & Daniel, 1978).

The average community college psychology curriculum consists of four courses (Daniel, 1970; Kulik et al., 1973). Both Daniel and Kulik et al. list the most likely curriculum to be introductory, child or developmental, adjustment, and educational. A popular recent innovation seems to be courses relating psychology to current social issues. Courses of this nature can be found at 11 percent of the two-year colleges (Kulik et al., 1973).

In summary, the literature describes the two-year college psychology curriculum as averaging about four courses. Introductory is by far the most popular course, and courses with a natural science orientation are decidedly unpopular.

METHOD

The Sample

The first step in our study of the science and technology curriculum in two-year colleges was to assemble a representative sample of colleges. An earlier study conducted for the National Endowment for the Humanities by the Center for the Study of Community Colleges was used as the starting point. This study had already assembled a sample (balanced by college control, region and size) of 178 colleges. Using this sample as the initial group, the presidents of these colleges were invited to participate in the current study. Acceptances were received from 144 of these schools.

At this point a matrix was drawn up with cells representing nine college size categories for each of six regions of the country. Using the 1977 Community, Junior and Technical College Directory (AACJC, 1977), the ideal size/region breakdown for a 175-college sample was calculated. The remaining 31 colleges were selected by arraying all colleges in the underrepresented cells and randomly selecting the possible participants. This technique produced a balanced sample of 175 two-year colleges. Table 1 shows how close our sample is to the percentage breakdowns of the nation's two-year colleges. The list of participating colleges is found in Appendix A.

Procedure

College catalogs and class schedules for the 1977-78 academic year were obtained from each of the 175 schools. A unique system for analyzing, classifying and reporting the course offerings was developed to deal with science courses in terms of both the unique features of the two-year colleges and the traditional science disciplines.

Table 1

Percentage Breakdown of 175-College Sample Compared to National Percentages by Size, Region and Control

	Size								
	1-499	500-999	1,000-1,499	1,500-2,499	2,500-4,999	5,000-7,499	7,500-9,999	10,000-14,999	15,000+
National %	15	18	13	17	17	8	5	5	4
Sample	13	16	13	17	19	9	5	6	4

	Region					
	Northeast	Middle States	South	Mid-West	Mountain Plains	West
National %	7	13	32	21	10	17
Sample	6	12	31	22	13	16

	Control	
	Public	Private
National %	84	16
Sample	84	16

The general structure of this system and the procedure for classifying a course are briefly described here as a preface to the detailed description of the categories within psychology.

Course Classification System in the Sciences*

Based on the catalog description, each science course listed in the catalog was placed into one of six major curriculum areas: Agriculture, Biological Sciences, Engineering Sciences and Technologies, Mathematics and Computer Sciences, Physical Sciences, and Social and Behavioral Sciences. These areas were chosen because they closely reflect the instructional administrative organization of two-year colleges as well as the organization of national and international professional science organizations and agencies, such as the National Science Foundation.

The second level of classification was concerned with the major subject field disciplines within the broad area. For example, the social and behavioral sciences are subdivided into:

Anthropology and Archaeology
PSYCHOLOGY
Sociology
Economics
Interdisciplinary Social Sciences
History, Philosophy, and Sociology of Science

The proliferation of course titles in psychology made it necessary to form categories that would encompass closely-related courses. The following breakdown explains which courses are included in this study. It should be noted that course inclusion was based upon the catalog description, and not limited to classes offered by the department of psychology (e.g., a Child Development course offered by the Home Economics department would be included if the course had a theoretical base).

*A complete description of the system used to classify courses is available from the ERIC Document Reproduction Service, Number 167 235.

PSYCHOLOGY

Includes courses and programs having to do with the nature, functions, and capabilities of the mind (feelings, needs, desires) and the scientific study of human behavior. Courses which note the personal relevancy of psychological theories are included, but courses which have personal growth or adjustment, or college and career orientation, as their primary focus are not included. The psychology courses include:

Elementary
General
Developmental
Abnormal
Social-Industrial
Personality and Psychology of Adjustment
Experimental
Educational
Contemporary Issues
Physiological

Elementary

General principles of psychology as they apply to everyday life. Courses which meet the criteria for General Psychology except for one or more of the following points were classified as Introductory: (1) the course is not a prerequisite for any other courses; (2) practical applications are stressed more than theory; (3) the school's curriculum includes a more intensive general psychology course (except where the more intensive course is specifically designated as advanced or honors psychology); (4) the course is specifically designed for non-social science majors; or (5) it is a one semester, terminal course. Courses in college orientation are not included.

General

A broad overview of the general field and fundamental principles of psychology. In most cases this course is used as the prerequisite for further courses in the field. General courses emphasize the theoretical aspects of psychology. In some cases this course is offered in a year-long series of classes. Advanced or honors sections in general psychology are included in this category.

Developmental

The study of the emotional, intellectual, social and physical development of the individual. Courses in this category may concentrate on a specific period of the human life-span (e.g., Child Development, Adolescent Psychology) or may cover the entire

developmental process--birth through death. Societal standards of "normal" development may be considered, but courses stressing the development of deviant behavior are classified as Abnormal. Developmental courses are found not only in the psychology curricula, but may be taught in allied health programs for health technicians or nurses, or education and early childhood education programs for parents and teachers.

Abnormal

The study of the etiology, symptoms, and therapeutic approaches for treatment of organic and functional disorders. May include courses dealing with mental retardation, giftedness, social maladjustment, emotional disturbance, and other behavioral anomalies. In some cases this course may be an elective for social science students, but it is generally directed towards psychology students and those in health and education programs.

Social-Industrial

The study of the individual that focuses attention on the interaction of internal and social processes as they relate to human behavior in general as well as in the work setting. Includes topics such as social perception, group and intergroup processes and social patterning. In addition to courses entitled Social Psychology and Industrial Psychology, this category includes Organizational Psychology, and Psychology for Supervisors. Courses of this type that are offered within the sociology department are included in this category. Although most courses within this group are college transfer courses in the psychology department, some courses are directed towards business personnel.

Personality and Psychology of Adjustment

Study of the ways personalities develop and change, often with an emphasis on the ways in which people adjust to their environments. Investigate topics such as emotions, reactions to frustration, individual differences, mental health principles, sexual adjustment, and current theories of personality. These courses are offered as a part of the psychology curriculum but may satisfy general education requirements. Courses which focus on the personal growth of the student and group counseling experiences are not included if they do not have a General Psychology prerequisite.

Experimental

A methodology course designed to introduce students to the fundamentals of behavioral research. Principles of experimental design and analysis. Usually has a general psychology prerequisite, and some call for a background in statistics. Intended for the college transfer psychology major.

Educational

An introduction to the basic principles of psychology that are pertinent to education including intelligence, social and emotional factors, and basic learning theories. May include principles and problems of testing and evaluation. Course is usually designed for teachers, prospective teachers, or psychology majors.

Contemporary Issues

Courses that investigate current issues in society that stress the theoretical application of psychology to these areas. Examples of courses in these areas include Psychology of Women, Social Psychology of Ethnic Minorities, Black Psychology, Human Sexual Behavior, Psychology of Contemporary Social Issues, and Psychological Foundations of Racism and Sexism. These tend to be general interest courses open to the entire college community, though occasionally they have a General Psychology prerequisite.

Physiological

Study of human behavior from a physiological point of view. An advanced level course designed for psychology majors and college transfer students who meet course prerequisites. Includes study of central nervous system, as well as examination of other areas dealing with the relationship between biological systems and behavior.

After all the science courses were coded (classified General, Developmental, Experimental, etc.), class schedules for the 1977-1978 academic year were examined and a count was made of the number of sections offered (day, evening and weekend credit courses) for each term. Prerequisites and instructional modes (e.g. lecture, lecture-lab) were determined from the catalogs.

RESULTS

Table 2, developed from the described procedure, presents the psychology curriculum offered in two-year colleges for the 1977-78 academic year. As indicated, every college lists at least one psychology course in its catalog, and virtually every college (99%) offers at least one section of psychology at some point in the academic year.

Table 2

Psychology Courses in the Two-Year Colleges, 1977-78 Academic Year

Type of Course	Percent of Colleges Listing This Type Course in Catalog (n=175)	Percent of Colleges Listing This Type Course in Class Schedule (n=175)	Percent of Total Psychology Courses Listed on Schedule (n=849)	Percent of Total Psychology Sections Listed on Schedule Lecture (n=5694)	Percent of This Type Course Having a Prerequisite
Elementary	23	18	4	4	5
General	87	87	25	56	22
Developmental	95	87	33	21	40
Abnormal	41	36	9	5	62
Social-Industrial	49	39	9	5	59
Personality/Adjustment	43	35	8	5	68
Experimental	14	8	2	(0.4)	87
Educational	37	28	6	2	70
Contemporary Issues	13	10	3	1	17
Physiological	5	3	1	1	100

Note: 1. 175 colleges (100% of sample) list one or more psychology courses in the college catalog.

2. 173 Colleges (99% of sample) list one or more psychology courses in schedules of classes.

Psychology Enrollments

Earlier studies indicated that the average enrollments in psychology accounted for six percent of all science courses, the average psychology program enrolled 629 students per year in 1968-69, and an average of four courses per school were listed in the catalog. The results of our study show continued growth in psychology, along with a similar growth in the sciences in general. Psychology still accounts for six percent of all science courses, but the average program in 1977-78 enrolled 1,041 students (this figure was attained by multiplying the average number of courses by the average class size), an increase of almost 66 percent in 4.9 different courses. Some of this growth may be a function of including courses offered outside of the psychology departments, but even more of the growth is probably a function of an increase in the average enrollment total for two-year colleges in general.

Social Science or Natural Science?

As the literature suggests, junior/community college psychology offerings have a definite social science orientation. Experimental and physiological, the only categories with a distinct natural science orientation, are infrequently offered courses--both accounting for under one percent of the total sections offered. It should be noted that both of these courses had the highest percentage of prerequisites, which may also account for the lack of enrollments.

Prerequisites

Perhaps the best indication of the linearity of the curriculum is the use of prerequisites as entry level blocks on course enrollments (see Table 3). As might be expected, the elementary and general courses had few prerequisites, and the experimental (87%) and physiological (100%) had stringent prerequisites. The rest of the courses developed no clear pattern as to prerequisites.

Regarding the data on prerequisites, two other issues emerge which need to be examined, the form of the prerequisite requirement (e.g.

Table 3

Prerequisites

	# of Courses	% with Prereqs.	Form of Prerequisites: Gen. Psych. (May be an earlier series)	Any Psy. or Soc. Sci.	Two Psy. Courses (May be part of series)	Soph. Stand.	Psy & Other Science	Psy. & Stat.	GPA or Test
Courses Offered by Psych. Dept.									
Elementary	31	0	--	--	--	--	--	--	--
General	211	22	72	2	7	13	--	--	7
Developmental	194	51	87	6	7	--	--	--	--
Abnormal	66	70	78	9	13	--	--	--	--
Social/Indust.	71	61	65	33	2	--	--	--	--
Personality/ Adjust.	65	68	80	14	5	2	--	--	--
Experimental	14	93	62	--	8	--	--	31	--
Educational	40	70	68	7	18	--	--	--	7
Contemporary Issues	26	19	80	20	--	--	--	--	--
Physiological	6	100	33	--	--	--	67	--	--
TOTAL	724	45	76	.0	8	2	1	2	1
Courses Offered by Other Depts.									
Elementary	9	22	--	100	--	--	--	--	--
General	--	--	--	--	--	--	--	--	--
Developmental	79	15	25	67	--	--	8	--	--
Abnormal	10	10	--	100	--	--	--	--	--
Social/Indust.	9	44	--	100	--	--	--	--	--
Personality/ Adjust.	--	--	--	--	--	--	--	--	--
Experimental	1	0	--	--	--	--	--	--	--
Educational	13	69	56	11	--	11	22	--	--
Contemporary Issues	4	0	--	--	--	--	--	--	--
Physiological	--	--	--	--	--	--	--	--	--
TOTAL	125	22	29	57	--	4	11	--	--
GRAND TOTAL ALL PSYCHOLOGY	849	48	72	14	7	2	2	1	1

sophomore standing, completion of a course in general psychology, etc.), and the differential use of prerequisites in courses offered within psychology departments (85% of the psychology courses) and those offered by other departments (15% of psychology offerings). Table 3 details these two areas.

As shown in Table 3, courses offered outside the psychology department are much less likely to have a prerequisite. Departments of psychology imposed prerequisite requirements for 45 percent of their offerings, while nonpsychology offerings had prerequisites only 22 percent of the time. If one excludes the introductory courses (elementary and general) from consideration, the differences between prerequisite requirements for nonpsychology and psychology department offerings are even greater. Excluding introductory courses, 59 percent of psychology department courses have a prerequisite, compared to only 22 percent of the nonpsychology department courses.

Departmental differences are clear not only in the percentage of prerequisites but also the form of the prerequisite requirements. In psychology department offerings, general psychology is the most common prerequisite. Outside courses with prerequisites, however, are more likely to require the completion of any other course in the social sciences than to require a specific course in general psychology.

The two courses that have a natural science orientation, experimental and physiological, also have the strictest prerequisites. Two-thirds of the physiological courses require a previous course in psychology and another science (usually biology), while almost one-third of the experimental courses require the completion of general psychology and statistics for admittance.

The use of prerequisites in advanced courses in psychology that are offered within the psychology department indicates a structured curriculum. But the fact that courses other than general psychology are rarely used as prerequisites would be an indication of a lack of sequence or linearity in the curriculum.

Curriculum by College Region, Control and Size

Table 4 represents the psychology curriculum in the 175 colleges classified by region, control, and size (The states included in each region and the colleges included in each of the groups can be found in Appendix A).

The most outstanding feature of the regional breakdowns is the absence of any really striking differences. The Middle States colleges are most likely to offer courses in abnormal and social-industrial, while those in the South are much less likely to offer abnormal courses. Colleges in the West are most likely to offer personality adjustment and contemporary issues, and least likely to offer educational psychology. They are also most likely to offer experimental and physiological, but this is probably more a function of college size since half the large schools are in the West.

The variable of control (public or private) is also largely influenced by college size, with 89 percent of the private colleges in the small college (less than 1,499 students) category. Accordingly, the private colleges are somewhat less likely to offer any of the advanced psychology courses. However, they are more likely to offer educational psychology.

Size of college naturally influences the variety of courses offered, although the differences here are not as great as one might imagine. The most evident differences are the higher availability of courses in experimental, physiological, and contemporary issues in large colleges. The finding that experimental psychology is limited to the large colleges is probably directly related to the availability of both a sufficient pool of psychology majors and laboratory space. Sheer numbers of available students account for the increased offerings in physiological and contemporary psychology. On the whole, while one must be impressed with the uniformity of effort in psychology nationwide, the large number of schools that do not offer courses beyond general and developmental leaves room for expansion of curriculum.

Table 4

Course Offerings by College Region, Control, and Size

Group	Total Sample	Region						Control		Size		
		North-east	Middle States	South	Mid-West	Mountain Plains	West	Public	Private	Small 1499	Medium 1500-7499	Large 7500+
N	(175)	(11)	(21)	(54)	(39)	(22)	(28)	(147)	(28)	(72)	(78)	(25)
Course												
Elementary	19	9	0	28	15	18	18	16	29	19	13	28
General	87	91	100	85	79	77	100	91	68	78	92	100
Developmental	87	100	90	87	87	91	89	91	79	83	91	100
Abnormal	36	45	62	22	38	45	29	38	25	25	42	48
Social-Industrial	39	45	57	28	38	41	43	42	21	26	46	52
Personality/Adjustment	35	45	29	24	41	23	57	37	25	28	32	64
Experimental	8	0	5	2	8	14	21	10	0	4	4	32
Educational	28	27	33	30	38	27	7	20	25	26	29	28
Contemporary Issues	10	0	10	0	8	14	32	12	0	1	12	24
Physiological	3	0	0	0	3	0	18	4	0	0	1	20

Catalog-Schedule Discrepancies

The data collected indicate which course is most likely not to be offered, even though it is listed in the college catalog. About one-fourth of the colleges that list educational psychology in their catalogs did not offer the course at all in 1977-78. For both physiological psychology and experimental psychology, over 40 percent of the schools that list these courses in the catalog did not offer them to the students. Our tabulations show a total of 216 courses from the sample of 175 colleges that did not appear on the schedule of classes, although they were listed in the catalog. Since 849 courses were actually offered, it can be seen that approximately one out of every five psychology courses listed in college catalogs was not offered. A disproportionately high percentage (35%) of the 216 courses that were not offered by the colleges were in the developmental classification. General psychology, on the other hand, was almost always offered if it appeared in the catalog.

DISCUSSION

Problems in comparing our data with past studies were discussed earlier in this monograph. To the degree that comparison is possible, however, a number of trends come to light. Most evident is the continued growth and virtual universal availability of the introductory course. Of the colleges in our sample, 97 percent offered either elementary, general, or both of these courses, which continues the trend that has seen the introductory course grow from being listed in the catalogs of 89 percent of the colleges in 1948 (see Sanford & Fleishman, 1950) towards inclusion in practically all two-year colleges.

Although our system of classifying numerous course titles under the heading of "Developmental Psychology" precludes accurate comparison with past studies, the large number of courses offered in this area attests to its popularity. On the other hand, there are a disproportionately large number of developmental courses listed in the college catalog that were not offered during the 1977-78 academic year. One must assume that these courses were not offered because of a lack of student interest.

This may be an early indication of a trend away from developmental courses, although it is hard to make any definitive predictions based on the available data.

The literature suggests that the one area that is actually declining in two-year colleges is educational psychology. In 1947, educational psychology was listed in the catalogs of 46 percent of two-year colleges (Sanford & Fleishman, 1950); this figure was down to 26 percent (Lux & Daniel, 1978) by 1975 (this figure only considers psychology department offerings). Although our data show that 37 percent of all colleges list the course in the catalog, closer analysis reveals that 28 percent of the colleges offer educational psychology through their psychology department, which would indicate that the decline in educational psychology appears to have stabilized.

One area that appears to have grown tremendously in recent years is abnormal psychology. Earlier data (Lux & Daniel, 1978) separate classes on the "exceptional child" from abnormal. They were combined for this study, but even the combination of these course titles would not account for the rise indicated. Our figures show 41 percent of the colleges list abnormal, while in 1975, 20 percent listed abnormal and seven percent listed the exceptional child. Perhaps the most logical reason for this is the recent interest in special education, coupled with the continued growth of programs for mental health workers.

As the literature suggested, the natural-science-oriented offerings continue to decline. Physiological psychology is down to five percent (from 6%) and experimental, which in 1975 was offered at 19 percent of the colleges, is only offered at 14 percent in 1977-78. This trend away from these courses reinforces the notion that most psychology enrollments are not psychology major, transfer-oriented students. It supports the notion that the two-year college psychology curriculum is not commonly structured as a sequential curriculum, but more as a collection of "special interest" courses with a general psychology prerequisite (as Wolfle recommended for nonmajors in 1952).

Contemporary issues courses, a rather recent development, were offered at 11 percent of the colleges in 1969, and have grown slightly

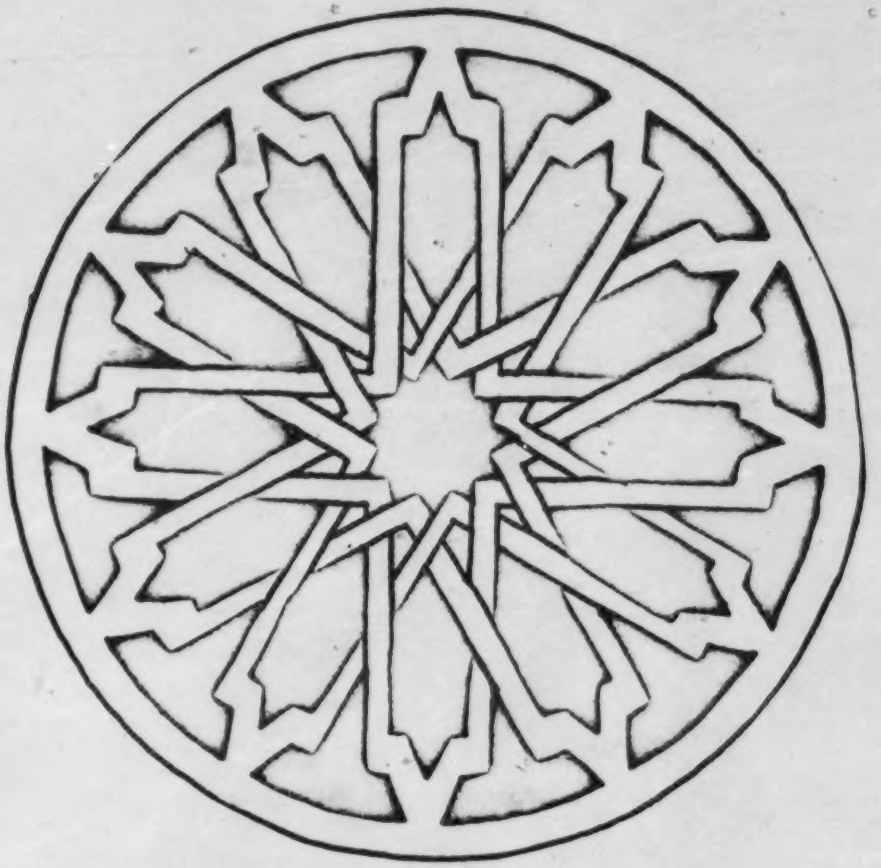
to 13 percent in 1977-78. However, the course titles offered in this category somehow seem more appropriate as upper division courses for students with a broad base of knowledge. At the very least, a background in the general principles of psychology should be prerequisite for students who enroll in these courses, yet only 17 percent of the contemporary issues courses had any prerequisite.

Although the two-year colleges do seem to offer a reasonable variety of courses, it is still clear from our data that only two psychology courses, general and developmental, are offered at over 40 percent of the nation's two-year colleges. There are large numbers of students whose only exposure to higher education is in the two-year college. There are also many nontraditional returning students who have wide-ranging interests. It is probably not feasible within the present structure of most two-year colleges to provide the range of courses necessary to accommodate the interests of all students, but it seems in some ways ironic that in this open-door system of education, many doors of knowledge are closed. The reason for this is clear--the correlation between enrollments and course offerings.

Nonetheless, the large number of courses oriented towards personal adjustment do seem to be questionable as "college transfer" or courses offered for credit. They seem more appropriately offered through the community services division, as part of an occupational program, or as an elective course taken for A.A. degree requirements. This observation is not new--Wolfle spoke out strongly about this issue in 1952.

Because of the heterogeneity of students and student interests in two-year colleges, the need for learning modules, an idea put forth during the 1973 APA Convention, would seem ideally suited. The National Science Foundation and the American Psychological Association might well jointly sponsor a project to develop reproducible modules suitable for two-year college students. These modules could deal with discrete areas of psychology (e.g., perception, learning, motivation, etc.) or could be organized as individual courses. By developing a complete system of these modules, a student could select a program based on interest and applicability to future pursuits rather than by what is available.

College location or size would no longer be a factor in the availability of courses, especially if modules could be funded through grants or checked out through a "national library" system. These problems and the proposed solution are not unique to psychology. Therefore, psychology faculty members who are interested in the modular approach might consider cooperative efforts with faculty from other disciplines.



PART II

INTRODUCTORY PSYCHOLOGY

THE LITERATURE

While the literature on psychology education has taken innumerable changes of direction, the one consistent theme is the vital role of the introductory course, which is usually titled Elementary, Introductory, General, or Survey of Psychology. Yet, as Kulik et al. (1973) aptly summarized, "If introductory psychology is more than a state of mind, it is less than a clear concept" (p. 22). Kulik et al. (1973) found that 98 percent of two-year colleges offer introductory psychology, and Losak and Beal (1970) claim that 100 percent of two-year colleges with enrollments in excess of 2,000 students offer introductory psychology. For

purposes of our study, introductory psychology refers to both Elementary and General classifications (see p. 12 for explanation of categories).

Not only is the introductory course in psychology widely offered, it is also a very popular course for students. The average class size in introductory psychology is 35 students (Irion, 1976), and since it is traditionally a lecture class, it is easily taught by a single instructor without the need for special facilities. As Irion notes, "the introductory course represents very big academic business" (p. 5). Of all the psychology courses listed by two-year colleges, Kulik et al. (1973) assert that introductory courses account for 27 percent of the course titles. To what degree this popularity is attributable to the fact that students see introductory psychology as a "bluff" course (Astin, 1965) is difficult to determine.

Because few of the students who take introductory psychology intend to major in the field, "Beginning-level courses . . . must be thought of as coherent experiences in themselves" (Kulik et al., 1973, p. 16). This, of course, limits the way the course should be structured. McKeachie and Milholland (1961) propose that "if we fail to build from the concrete and specific to more general principles, we have failed to teach adequately" (p. 28). Yet McKeachie and Milholland could not reach a decision on whether the first course should be a year-long sequence (Kulik et al. say that 25.4% of colleges sampled offer two- or three-term sequences, 1973), and there is great variation in the units/term configuration. Table 5, as it appears in Daniel (1970, p. 539), reports this variation.

Table 5

Unit/Term Configuration of First Course

Introductory Course	
3 hour / 1 quarter	3%
3 hour / 1 semester or 4 hour / 1 quarter	67%
4 hour / 1 semester, 5 hour / 1 quarter, or 3 hour / 2 quarters	11%
3 hour / 2 semesters or 3 hour / 3 quarters	15%

The question of whether personal adjustment should be one of the goals of the first course is also relevant. Though the adjustment orientation is discouraged in the literature (McKeachie & Milholland, 1961; Wolfle, 1952), a study of introductory psychology students at a California two-year college showed introductory psychology to be instrumental in influencing personal adjustment and modifying authoritarian attitudes (Corey, 1968).

There is also disagreement over whether the introductory course should include laboratory work. Despite the expense involved, McKeachie and Milholland (1961) recommend inclusion of a laboratory component wherever the first course involves a year sequence. Although Katz (1978) offers ways of reducing the greater cost of a laboratory over straight lecture, perhaps the cost should not be the factor that influences the decision on whether labs should be offered. Where instructors favor the use of laboratories but are discouraged by cost-conscious administrators, the salutary effect of introductory psychology on the budget should not be overlooked. Irion (1976) notes that "Few other courses in any college touch as many students, have as consistently high enrollments, or bring as high a tuition return to the college as does the introductory psychology course" (p. 8).

Alternatives to the traditional, single course, survey format of introductory psychology prevail in certain colleges, with some offering separate courses for honors students, psychology majors, and nonmajors. Separate courses for nonmajors were offered at 7.2 percent of two-year colleges (Kulik et al., 1973), and advanced general psychology was offered at five percent of the colleges reported by Lux and Daniel (1978). Senn (1977) is a strong critic of the traditional survey format, claiming that instructors are necessarily torn between depth and breadth. Instead of the often incoherent survey course, he suggests that lower-level topical courses be offered. He cautions, however, that "When any curricular component is accepted by 98 percent to 100 percent of the colleges and universities in this country, changes and alternatives to the curriculum must be offered with a great deal of caution" (1977, p. 125).

Though it seems appropriate to proceed with caution, the number of students who enroll in introductory psychology courses mandate continued research on the shape and form of first-year courses.

METHOD

The curriculum study described in Part I provided the data presented here on introductory psychology. The categories Elementary and General are included in this classification. A description of the courses included in these two categories can be found in the curriculum chapter. Please note that classes that are completely "applied," and teach no general principles of psychology, were not considered for this study. Also excluded were courses on college or career orientation that are often offered through departments of psychology.

RESULTS

The data support past findings that virtually all two-year colleges offer some form of introductory psychology. Table 6 represents the frequency of these course offerings.

Table 6

Frequency of First Courses

Course	Percent Listing in Catalog (n=175)	Percent Listing in Schedule (n=175)
Elementary	23	18
General	87	87
Colleges with both Elementary and General	14	8
Colleges with either Elementary or General	97	97

Introductory courses are also responsible for extremely heavy enrollments. Enrollment figures (obtained through a class section survey that is described in Part III on Instructional Practices) show the following enrollment figures for first-course sections, with the final column showing enrollments for all science sections as a means of comparison.

Table 7

Introductory Psychology Enrollments

	Elementary	General	Total Sample
Initial Enrollment			
Males	13.8	15.4	16.3
Females	23.5	21.9	15.5
Total	37.3	37.3	31.8
Received Grades			
Males	10.1	12.6	12.8
Females	19.5	19.0	12.5
Total	29.6	31.6	25.3

Introductory psychology appears to be a good source of enrollments, particularly in light of the many sections of these courses that are actually offered during the academic year. Our results show that colleges offering elementary psychology run 6.2 sections per year, and those offering general psychology average 15.1 sections per course, per year (calculated by dividing the total number of sections offered by the total number of courses offered). The average number of students enrolled in a first course in psychology (in colleges that offer one or more introductory courses) is 758 per year! One college in our sample offered 155 sections of general psychology in a single year.

As presented in Table 5 (p. 26), large colleges were more likely to offer both elementary and general psychology. All colleges (100%) in the Middle States and the West offered general, but only 79 percent of

those in the Midwest and 77 percent in Mountain/Plains offered it. Elementary was widely offered at private colleges in the South, but was not offered at any colleges (public or private) in the Middle States.

One of the more obvious organizational differences between elementary and general psychology is the number of credits offered and the use of multiple course sequences. The following table demonstrates these differences:

Table 8

Units/Term Breakdown by Course

Units/Term	Course	
	Elementary	General
3 hour / 1 quarter	47%	4%
3 hour / 1 semester or 4 hour / 1 quarter	42%	57%
4 hour / 1 semester, 5 hour / 1 quarter, or 3 hour / 2 quarter	11%	22%
3 hour / 2 semester or 3 hour / 3 quarter	0%	17%

While no elementary courses were offered in a multi-term sequence, six percent of the colleges offered a three-quarter sequence of general psychology, and 13 percent offered a two-term sequence. Two colleges (1% of sample) offered a three-quarter/3-unit option plus a 5-unit and 4-unit, two-quarter option.

Very few colleges offered an advanced or honors section in general psychology. This type of course was offered at only three percent of the colleges in the sample.

There were also few courses that scheduled laboratory hours as a part of the general psychology course. Only three percent of the colleges offering general psychology actually scheduled laboratory hours, although 17 percent of the instructors of general psychology classes (from class section survey described in Part III) noted some use of laboratory experiments by students.

DISCUSSION

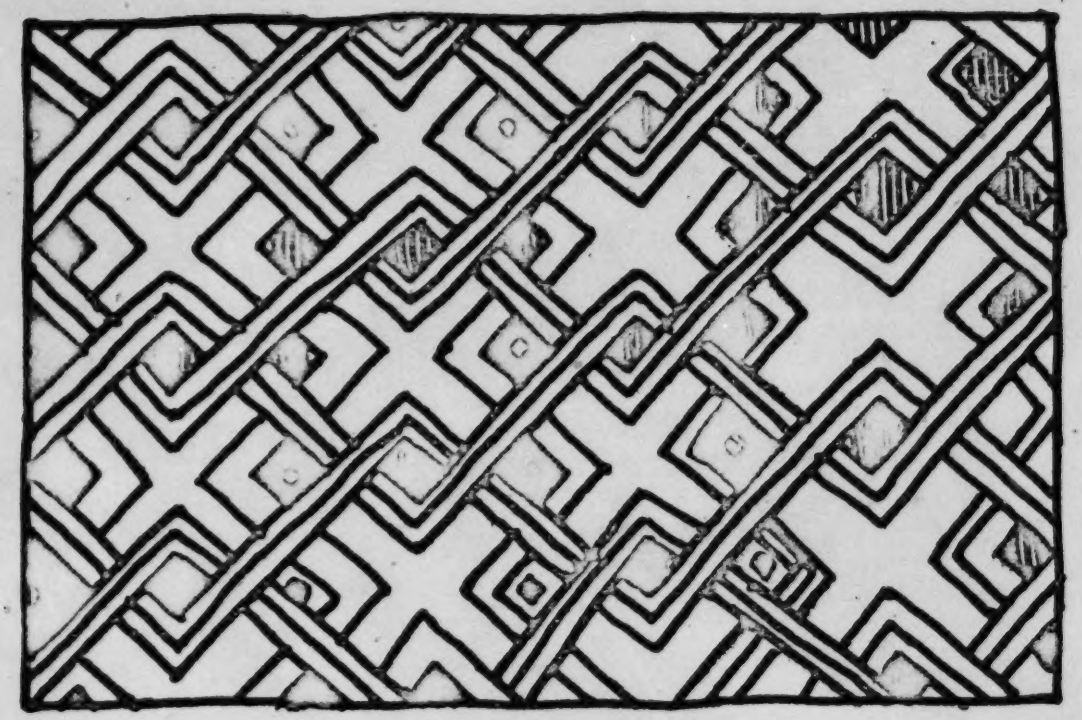
The two-year college psychology curriculum revolves almost entirely around the introductory course. Subsequent courses often have a general psychology prerequisite, but rarely do advanced courses have prerequisites beyond general psychology. General psychology alone accounts for 56 percent of all sections in psychology included in this study.

Because of their importance in the curriculum, introductory courses need to be closely scrutinized. Do they, as Senn (1977, p. 125) suggests, "lack coherence," or are they presented as "A bewildering array of topics . . . with little or no integration?" How feasible is a modular type of course arrangement? Are most general psychology courses taught in a way that would justify their satisfying general education requirements, as is often the case? These questions would seem to merit an intensive examination of the state-of-the-art in introductory psychology courses in two-year colleges. This study should also address the competencies a student should develop in these courses, a recommended performance level to validate these competencies, and possible predictors of success in the course. McKeachie and Milholland offer some sample objectives (1961, pp. 61-66) that could be used as a starting point.

While it has been acknowledged that few two-year college psychology students transfer to four-year colleges or universities as psychology majors, there is an important minority of students who do intend to major in psychology or a related social science beyond the community/junior college. One might consider separate courses for these students, so that a greater percentage of introductory courses could be redirected towards the nonmajor students who comprise the majority of enrollments in these courses. This suggestion would appear to be easily feasible in many of the colleges which offered general psychology and had enough students to offer over 20 sections a year. Out of the approximately 750 students that it would take to fill 20 sections, it seems reasonable to assume that there would be 20-25 prospective psychology majors to warrant a special section of introductory psychology.

Faculty in two-year colleges should systematically ascertain the amount of laboratory experience in equivalent courses provided for students at their major transfer institutions. Perhaps two-year college psychology instructors have been led to believe that schools cannot afford lab space, or that it is not necessary in psychology. Irion (1976) suggests the "ADA Clout" that general psychology instructors possess--perhaps they should attempt to utilize this clout if they feel that their students would benefit. The suggestion for using labs in psychology courses is not going to come from school administrators, who must be happy with the present "profitability" of psychology courses, but instructors should not assume it is impossible to implement. Past recommendations that lab work should be included in year-long survey courses seem appropriate, but the question of whether or not to use lab work will have to be made by the instructor or department chairperson. This decision should be based on an assessment of student needs, not on the basis of accepted institutional practices.

In summary, the introductory course in psychology at two-year colleges must be presented as a coherent educational experience that does not presuppose that students have a desire for further study in psychology. Alternative methods of course structure should be carefully researched so that the course might become more relevant in form and presentation to the heterogeneous clientele who enroll in introductory psychology.



PART III
INSTRUCTION

THE LITERATURE

Information about instructional practices in two-year colleges is historically fragmented and disparate. Cohen and Brawer (1972) note that, "Despite the magnitude of the American educational enterprise, surprisingly little is known about the process of instruction and few agencies are systematically studying the matter" (p. 214). Psychology instruction is not atypical, in fact, "very little is known about the specific instructional techniques and classroom behavior of the typical college teacher of psychology" (Astin, 1965, p. 309).

This is not meant to imply a lack of variation or innovation in the field, for there has been tremendous experimentation with instructional

innovations (see Maas & Klieber, 1975, for an extensive compilation of teaching innovations in psychology). But research tends to be localized, and in many cases purely descriptive. Of particular concern within the two-year college context is that, "the problem of how to deal with the less academically apt student is not yet resolved" (Wood & Wylie, 1975, p. 384).

There has been some investigation on the utilization of class time. Astin (1965), for example, found psychology courses rated very low on the amount of class participation and interaction. Lectures tend to be the most widely accepted means of communicating information. Unfortunately, as Walker and McKeachie (1967) point out, "The lecture, in particular, in spite of its nearly universal use, or possibly because of it, tends to be generally ineffective, inefficient, uninspiring, or misused" (p. 12). Guest lectures are utilized by only 11.3 percent of the faculty (Kulik et al., 1973).

Aside from the traditional lecture format for psychology instruction, the most widely acclaimed and documented approach to teaching psychology is the Personalized System of Instruction (PSI) (Keller, 1968). This plan was used in three percent of psychology courses in 1969 (Kulik et al., 1973). Claims about the success or failure of the Keller Plan vary widely. Sheppard and MacDermot (1970) attest to higher scores on both objective and essay tests using the Keller Plan. In addition to higher achievement, Johnson et al., (1975) note a lower dropout rate when students use PSI. Not the least surprising is that these findings are supported by Keller (1974). On the other hand, Wood and Wylie (1975) found "it is the less apt student who profits least, rather than most, from these (Keller plan) courses" (pp. 382-383). In short, the data seem to be somewhat mixed, but generally positive.

Another alternative means of instruction is textbook assignments. The decline in student reading scores has been a widely noted issue for the past few years, and naturally the impact is strongest at the two-year college level. But the ability to read is particularly crucial for achievement in psychology. In fact, Levin, Foster and Leake (1976), in

studying the correlation between reading ability and grades, found that psychology course grades have a higher correlation with reading ability than English courses. Noting this interdependency between psychology and reading ability, Sherman (1976) devised an introductory psychology course to be used for remediation of reading and writing problems. This idea may merit further study and development, as the reading problem is a growing concern. In 1967, 75 percent of the psychology instructors were satisfied with their textbook (3% used no text), and only six percent felt it was too advanced (National Science Foundation, 1969). As reading scores continue to fall, the difficulty of matching text to student abilities becomes more acute.

One area of instruction that seems to generate a high level of agreement is the importance of utilizing behavioral objectives (Cohen & Brawer, 1972; Walker & McKeachie, 1967). Ostrowski (1977) claims that a behavioral objectives delivery system results in better student performance, greater persistence, and high instructor evaluation.

While there is some disagreement about the utility of different instructional methodologies, there is agreement that instructors of psychology rely heavily on objective tests to evaluate their students (Astin, 1965; Irion, 1976). The extent to which other evaluative measures are utilized is not well documented. Eltringham (1976) suggests assigning an independent research topic, and Young (1970) reports that faculty and students are in favor of a no-failure grading policy. Whether these ideas affect the level of student learning is not discussed.

The areas where teachers feel they need more assistance are particularly interesting because their concerns reveal the need for both staff development and improved facilities. Table 9 reflects these instructional needs. As noted earlier the available information on instruction does not present a very complete picture, although interest in this area, spurred by Keller and others, is rapidly growing.

Table 9

Psychology Instructor Needs

Ideas and materials for demonstrations	51%
New ideas on teaching or organization	49%
Teaching aids (films, tapes)	48%
New ideas for curricular expansion or revision	32%
Projects, equipment for lab work	31%
Better or different texts	18%
Programmed learning materials	18%

(Daniel, 1970, p. 538.)

METHOD

The first step in assessing instructional practices in the sciences was to establish a random sample of colleges. The procedures used in putting this sample (n=175) together are described in Part I. Each college president who agreed to participate in the study was asked to name a contact person at the school, who was given the title "on-campus facilitator." All communication and correspondence between the Center for the Study of Community Colleges and the sample colleges was conducted through the 175 on-campus facilitators.

Once the college catalogs were obtained from each school, Center staff read each course description in the catalog and put courses in the appropriate category according to the Course Classification System for the Sciences (Hill & Mooney, 1979). These courses were then arrayed in six groups. The psychology courses for each school were listed along with all other behavioral and social science courses listed in the catalog.

The next step in the process involved counting the science course offerings in the Fall 1977 day and evening schedules of classes. Each college's schedule was reviewed one section at a time. Using the course list developed from the college catalog, courses that were properly categorized as science courses were identified for inclusion in this study. Each science course section was then underlined. A list was developed for

each college that showed the courses offered and the number of sections of the course that were listed in the schedule of classes.

The selection of individual class sections was done by drawing every thirteenth section in each of the six major science areas. After randomly selecting the first college, the system was automatically self-randomizing. Each sampled section was recorded on a checklist for the facilitator at each school. This checklist included the name of the instructor listed as teaching the section, the course title, section number, and the days and time the class met. A copy of this checklist was kept at the Center to tally the surveys as they were received.

A survey form for each instructor was mailed to the campus facilitator, together with instructions for completing the questionnaire and a return envelope addressed to the same facilitator (see Appendix B for a copy of the Instructor Survey). The return envelope had the instructor's name listed as the return address and was clearly marked "Confidential." This enabled the on-campus facilitator to keep an exact record of who had responded without opening the envelope. This technique guarantees confidentiality to the respondent while also enabling the facilitator to follow up on the retrieval of surveys from nonrespondents.

Questionnaires were mailed out to 1,683 instructors. Since the surveys were mailed out between February 20 and April 10, 1978 (after the completion of the fall term), 114 surveys were not deliverable; this was due to faculty dismissal, retirement, death, etc. An additional 77 sections were cancelled. Of the 1,492 deliverable surveys, 1,275 were returned. This established an overall response rate of 85.5 percent. Questionnaires were retrieved from 100 percent of the faculty sampled at nearly 69 percent of the colleges. Table 10 shows the relationship between completed surveys in the different disciplines and the percent of the total number of science class sections offered in these disciplines in the 1977-78 academic year.

Of the 1,275 responses, 143 surveys were retrieved from instructors of psychology. The results reported here are based on these responses.

Table 10

Percent of Survey Responses and Total Sections by Discipline

Discipline	Returns on the Class Section Survey--% of Total (n=1,275)	77-78 Academic Year--% of Total Lecture Sections (n=49,275)
Agriculture	3.0	3.0
Biology	12.5	10.5
Engineering	11.3	11.0
Math/Computer Science	30.8	32.5
Chemistry	6.4	5.1
Earth/Space	3.6	3.6
Physics	3.5	3.2
Interdisciplinary Natural Science	2.3	2.7
Anthro & Interdis. Social Science	2.4	3.0
Psychology	11.2	11.6
Sociology	7.4	8.1
Economics	5.4	5.6

RESULTS

Instructors of psychology teach their courses much like their colleagues in the other social sciences (sociology, economics, anthropology). However some differences appear when psychologists are compared with the science faculty as a whole.

Class format for each of the classifications was determined from the inspection of college catalogs (see Table 11). Except in experimental psychology, the lecture format clearly predominates. Courses that are

designated lecture-field are those that either required field trips or had an observation component. Most of the lecture-field type courses were offered by early childhood programs that included classroom observation. Classes that were counted as lecture only occasionally had a discussion section, but these are rarely noted in the catalog.

Table 11
Formation of Classes

	Lecture	Lecture-Lab	Lecture-Field
Introductory	100		
General	97	3	
Developmental	87	3	10
Abnormal	96		4
Social-Industrial	99		1
Personality/Adjustment	100		
Experimental	40	60	
Educational	98		2
Contemporary Issues	97		3
Physiological	100		

As expected, class time is largely comprised of lectures and class discussion. Table 12 lists the percentage allotment of class time in psychology classes as well as the allotment for the total science faculty.

In addition to the allotment of class time, we also looked at the percentage of faculty utilizing these different class activities. As one would expect, virtually all instructors lecture. Guest lecturers were used in 25 percent of the psychology classes, compared to only 11.8 percent of the total sample. Psychology instructors were also more likely than their natural science counterparts to include class discussions.

Table 12

Amount of Class Time Devoted to Activities

	Psychology Classes	Total Science Classes
Lecture	47.8%	44.8%
Class discussion	19.4	15.0
Viewing and/or listening to film or taped media	9.4	4.4
Quizzes/examinations	8.4	9.7
Student verbal presentations	3.8	2.6
Lecture/demonstration experiments	3.6	3.2
Guest lectures	2.1	.8
Laboratory experiments by students	1.9	11.3
Simulation/gaming	1.6	.9
Field trips	.3	.7
Laboratory practical exams	.2	1.7
Other	1.3	4.9

While 93.7 percent of the psychology classes had discussion periods, natural science, math engineering, and agriculture classes had class time devoted to discussion in less than 78 percent of the classes. As one would expect, there was much less opportunity for laboratory experiments by psychology students (only 14.7% of classes) than in some of the other science disciplines (e.g., lab experiments were used in 86.7% of physics classes, 80.5% of chemistry). At the same time, psychology instructors were quite likely to use some sort of media during the term, more than

80 percent used films or tapes as opposed to only 46.4 percent for the total science group.

Films were the most frequently used media. Of the 143 psychology respondents, 37 (25.9%) said they used films "frequently" in class. Slides were used either "frequently" or "occasionally" by 30.1 percent of the instructors. Of those instructors who used slides, 32.6 percent either developed the slides themselves or with another faculty member. Maps, charts, illustrations, and displays were used by 42.7 percent of the psychology instructors (only 9.1% used them frequently). This was far less than in agriculture, anthropology and interdisciplinary studies, chemistry, and earth/space sciences, where maps, charts, etc. were used in over 70 percent of the classes.

Grading practices in psychology courses were traditional, as shown in Table 13.

Table 13

Grading Practices

	Psychology Classes	Total Science Classes
ABCDF	74.1	73.6
ABCD/No credit	14.7	15.3
ABC/No credit	7.7	5.6
Pass/Fail	.7	1.4
Pass/No credit	2.8	2.8
Other	6.3	5.3

Note: Some courses employ multiple grading options, which is why these columns total over 100%.

We also looked at the extent to which various classroom activities determine students' grades. Objective tests were by far the most prevalent means of evaluation, followed by essay exams and papers written outside of class. Table 14 shows the grading emphasis in psychology.

Table 14

Grading Emphasis

	Counted 25% or More Toward Grade		Included But Counted 25%	
	Psych	Total	Psych	Total
Quick score/objective tests	73.4	59.6	12.6	15.3
Essay tests	35.7	40.8	22.4	14.7
Papers written outside of class	21.7	8.9	39.9	25.1
Participation in class discussion	3.5	1.9	45.5	32.5
Regular class attendance	4.9	2.8	41.3	32.0
Research reports	6.3	2.7	28.0	14.2
Oral recitations	4.2	1.9	23.8	16.5
Papers written in class	8.4	4.9	11.9	8.1
Field reports	5.6	1.8	14.7	9.2
Homework	5.6	6.5	10.5	31.5
Workbook completion	2.8	3.5	10.5	14.1
Nonwritten projects	2.1	1.8	12.6	8.1
Individual discussion with instructor	.7	.8	11.9	8.9
Laboratory reports	.7	10.4	7.7	16.9

The most commonly used type of test question is multiple response, which is frequently utilized by 85.3 percent of psychology instructors. Considering that only half the total sample used multiple choice questions frequently, this percent is high. Essay questions were the next most popular form of test question (frequently used by 43.4% and seldom used by 32.9%), and completion questions were either frequently or seldom used

by about half the psychology instructors.

Perhaps more vital than the evaluation tools used are the abilities that instructors want their students to demonstrate. Table 15 shows the responses to this question for psychology instructors and for the total sample. For this question we have included responses for the total science faculty, psychology instructors, and social science instructors (anthropology and interdisciplinary, economics, and sociology).

Table 15

Desired Student Outcomes

	Total (n=1275)	Psych (n=143)	Soc Sci (n=194)
Mastery of a skill			
Very important	51.0	21.0	17.5
Not important	17.3	35.7	36.1
Acquaintance with concepts of the discipline			
Very important	83.1	87.4	83.5
Not important	1.3	1.4	1.5
Recall of specific information			
Very important	42.7	52.4	32.0
Not important	5.7	1.4	9.8
Understand the significance of certain works, events, phenomena, experiments			
Very important	44.9	55.2	51.5
Not important	17.2	7.7	7.2
Ability to synthesize course content			
Very important	46.5	51.0	60.8
Not important	10.0	4.2	1.5
Relationship of concepts to student's own values			
Very important	24.0	50.3	49.0
Not important	35.5	12.6	10.3

Related to the issue of abilities that students should be able to demonstrate are the course goals held by the instructor. The results of these questions (see Table 16) reveal the disciplinary distinctions between psychology and other sicneces. Instructors were asked to select one quality from each list of four that they most wanted their students to achieve.

Table 16

Desired Qualities for Students

		Psychology	Total
Set 1	Understand/appreciate interrelationships of science & technology with society	38.5	26.9
	Be able to understand scientific research literature	5.6	1.5
	Apply principles learned in course to solve qualitative and/or quantitative problems	50.3	61.4
	Develop proficiency in laboratory methods and techniques of the discipline	2.1	8.3
Set 2	Relate knowledge acquired in class to real world systems and problems	66.4	48.2
	Understand the principles, concepts, & terminology of the discipline	29.4	42.6
	Develop appreciation/understanding of scientific method	1.4	2.2
	Gain "hands-on" or field experience in applied practice	2.1	6.1
Set 3	Learn to use tools of research in the sciences	4.2	8.6
	Gain qualities of mind useful in further education	21.7	32.9
	Understand self	42.7	9.4
	Develop the ability to think critically	30.8	46.6

By far the most striking cleavage between psychology and the sciences as a whole is the emphasis of the goal "Understand self" (see Set 3). This disparity would undoubtedly have been much greater if we had included in our study the large numbers of courses that have catalog descriptions emphasizing the personal orientation of the course.

The choice of reading materials, amount of reading required, and the level of faculty satisfaction with the materials used are all important topics to be explored when considering instructional practices. As expected, the most widely used reading material was the textbook, which was utilized by 98 percent of the psychology instructors. The average instructor assigned 392 pages of textbook reading--a relatively high figure in relation to the total sample but about normal for a social science course. There was a fair amount of dissatisfaction with the texts, and 15 percent said they definitely intended to change to a new textbook. A little over half the faculty had total say in textbook selection, 8.6 percent selected their own but had to verify it, 20 percent were members of the selection committee, and 17 percent did not have a voice in textbook selection. Various other reading materials (e.g., newspapers, journal articles, syllabi, reference books) accounted for an additional total of 113 pages of reading in two-year college psychology courses. This results in an average total of 505 pages.

In addition to classroom activities and course goals, instructors were asked to note which, if any, out-of-class activities were required or recommended. The list of activities included on-campus educational films, other films, field trips, television programs, museum attendance, volunteer service, outside lectures, and tutoring. None of these activities were required by more than seven percent of the faculty in psychology, although films were recommended by over one-third of the teachers, television programs were recommended by 58 percent, and 45.5 percent of the instructors recommended outside lectures. Almost 30 percent of the psychology instructors recommended doing volunteer work on a community service project, which was much higher than the 11.6 percent of the total science faculty to recommend it.

DISCUSSION

The reported activities and emphases of psychology instructors would seem to align closely with the other social sciences. Although psychology is sometimes separated from these social sciences and termed a behavioral science, in the two-year colleges this distinction seems inappropriate.

Most of our data support past findings regarding instructional practices. The lecture is by far the most prevalent means of communicating information, but our data reporting that class discussions account for the next largest block of class time run counter to Astin's (1965) assertion that psychology classes have little student-professor interaction. Of course, one reason for the higher than expected amount of classroom interaction may be a factor of the orientation towards student self-adjustment in community colleges, whereas Astin's sample included both two-year and four-year colleges.

There seems to be a trend towards faculty dissatisfaction with textbooks with the percentage of satisfied faculty dropping from 75 percent in 1967 (National Science Foundation, 1969) to 65 percent in our study. This can be accounted for not only by the declining reading scores of students, which make many college texts unsuitable, but also because of the expansion of knowledge within psychology, which may well make older texts obsolete. Instructor satisfaction notwithstanding, Levin et al. (1976) found a high correlation between student reading ability and success in psychology courses. Our data, which show an average reading assignment of 505 pages, argue strongly for research to determine the reading levels in psychology textbooks, since it is hard to imagine a student with poor reading skills mastering over 500 pages of college level reading material. This clearly points up the need for identification of students with reading problems prior to enrollment so that necessary remediation efforts can be made. It may also be necessary to extend the use of reading tests as entry-level prerequisites to psychology courses.

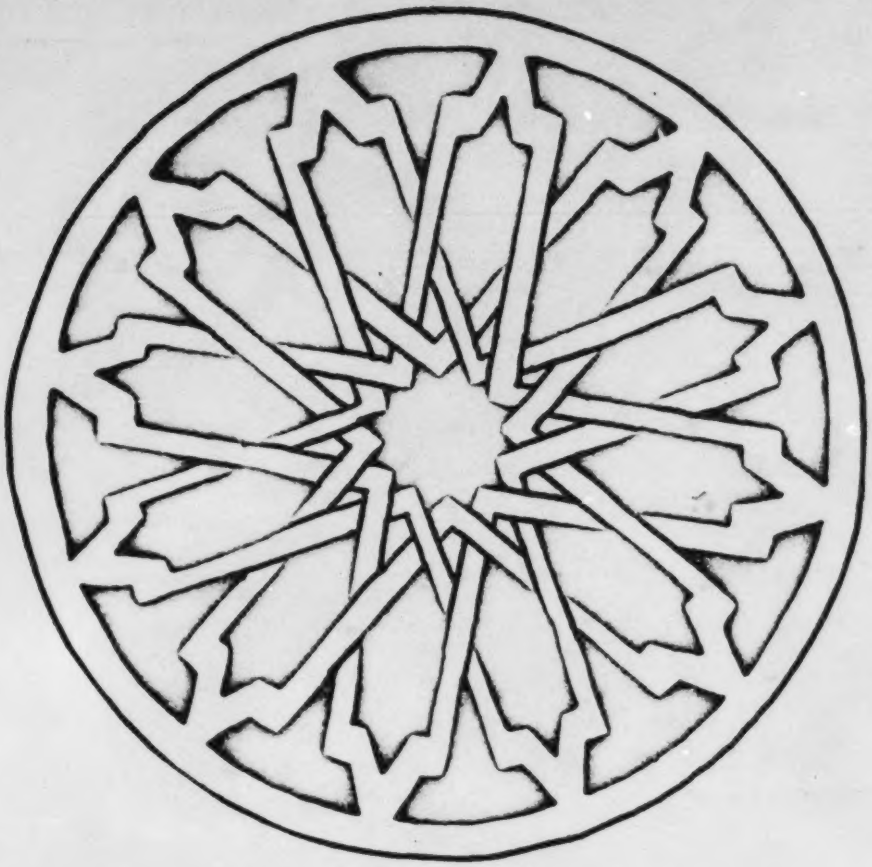
The question of students' declining reading ability leads naturally to the question of whether psychology courses require students to write

enough. This becomes important because so many students take psychology courses to fulfill general education requirements. The data suggest that objective tests are by far the most prevalent means of evaluation. Papers written outside of class count 25 percent or more towards students' grades in only one psychology course in five. Essay exams are a significant evaluation tool in only 36 percent of the courses, and are never used at all in nearly one-fourth of the courses. Because of its general education function, psychology instructors should require that their students be able to put their thoughts and ideas into a coherent paper.

The use of the Keller Plan (PSI) continues to be limited to around three percent of the courses, as the literature suggests. Although PSI has generated great enthusiasm in its adherents, there is still some debate as to its utility with a junior college population. Continued research should establish or discount its usefulness, particularly as it relates to the less apt student. If it can be established that PSI is a viable alternative to the traditional lecture format, faculty must be given adequate release time to restructure their courses.

Instructors of psychology have been fairly resourceful in their use of guest lectures (25% use them), but we would encourage even greater use of this activity. It not only can provide for different perspectives on course material, but is also a means of drawing the community expertise into contact with the students.

Virtually all instructors utilize some sort of media. In fact, they are more likely to show films than any other scientific discipline. Otherwise, psychology instructors look like their social science colleagues. Although lectures are often criticized for their lack of creativity and utility, until the instructors develop some viable alternatives, psychology will continue to be presented in the traditional lecture/discussion format.



PART IV
THE FACULTY

Teaching is the raison d'etre of two-year colleges. Therefore, much of the attention on two-year college research would seemingly be directed towards the faculty. Unfortunately, whereas little is known about effective instructional methodologies, even less is known about what makes a good teacher. Until educational research begins to uncover some of the psychological and perhaps physical attributes that make an individual an effective instructor, data on faculty will necessarily be superficially descriptive. Therefore, it is not surprising that the literature on psychology instructors in two-year colleges is particularly sketchy. Degree attainment seems to be the primary focus for past writings.

Kulik et al. (1973) reported that 11.3 percent of the faculty had a doctorate degree in 1969 (Daniel, 1970, reported 19%) and suggested a relationship between psychology staff degree attainment and curricular offerings: "Where the percentage of PhD's on the faculty is low, there may be further constraints on the curriculum" (p. 17).

But the issue of whether the doctorate is suitable training for a community college teaching job is debatable. Norton (1972) argues strongly against the need for the doctorate: "A person who earns a PhD in a typical graduate department of psychology may neither be fit for the two-year college position nor consider the two-year college fit for him. He has overly identified with the graduate faculty model of a research/subject matter specialist, but he is undertrained in major tasks required of the instructor" (p. 449). Degree attainment aside, the National Science Foundation (1969) was clearly correct in stating that "the teaching capability of the teacher would seem to be a more important asset than his research output" (p. 2).

There is no question that the master's is the most widely held degree, but both Norton (1972) and Daniel (1970) point out that the American Psychological Association does not accord full membership to less than doctoral individuals. Irion (1976) attempted to get a picture of the ways in which introductory psychology was taught in undergraduate psychology departments, but he ran into difficulty because the APA labels he acquired "did not include any community colleges" (p. 4). This isolation of the community college faculty is aptly observed by Daniel (1970), who states, "Most striking of all is the impression that junior college teachers feel isolated and urgently seek working relationships with other psychologists" (p. 542).

Only slight attention has been paid to the attitudes of psychology faculty. One thing that has been established is that they are well aware of the difficulty in teaching the student with poor motivation or ability. Daniel (1970) found that 61 percent felt that teaching these students was an "acute problem." With the increasing numbers of nontraditional students, the problem is surely still alive.

METHOD

A limited amount of information on the faculty was compiled from the class section survey described in Part III. There were 143 responses from psychology instructors included in this sample.

RESULTS

In 1977, 21 percent of the psychology faculty had obtained a doctorate degree, 73.4 percent had a master's, and 4.2 percent held the bachelor's (1.4% did not answer this question).

Employment status breaks down as follows:

Table 17

College Status of Psychology Faculty

Full-time faculty	74.8%
Part-time faculty	16.1
Dept. or div. chairperson	7.7
Administrator	2.1
Other	1.4
No answer	1.4

The largest percentage of the faculty had been teaching in a two-year college for 5-10 years (39.9%). Very few faculty were recently hired or were extremely long-term faculty. Only 2.8 percent of the psychology faculty had been at a two-year college for less than one year or more than 20 years.

Many types of instructional assistance were available to the faculty, and in most cases the faculty utilized these services:

Table 18

Assistance Available to Faculty

	Assistance Available	Utilized
Clerical help	87.4	73.4
Library/bibliographic assistance	69.9	47.6
Media production facilities/assistance	68.5	44.8
Test-scoring facilities	60.1	37.1
Tutors	42.7	25.2
Readers	15.4	7.0
Paraprofessional aides/instructional assistance	14.0	10.5
Laboratory assistants	12.6	10.5

Clerical help is obviously the most desired assistance. The large use of test-scoring facilities and the limited utilization of readers seems in line with the psychology faculty's use of objective tests.

Of even greater importance is what the instructors felt they needed to make their course even more effective. The more popular options are noted in Table 19:

Table 19

Psychology Instructors Would Like

Students better prepared to handle course	50.3%
Availability of more media	46.9
Instructor release time	39.2
Smaller class	39.2
Professional development opportunities for instructors	25.9
Better lab facilities	21.7
Stricter prerequisites	21.0
More interaction with colleagues or administrators	20.3
More readers/paraprofessional aides	18.2

DISCUSSION

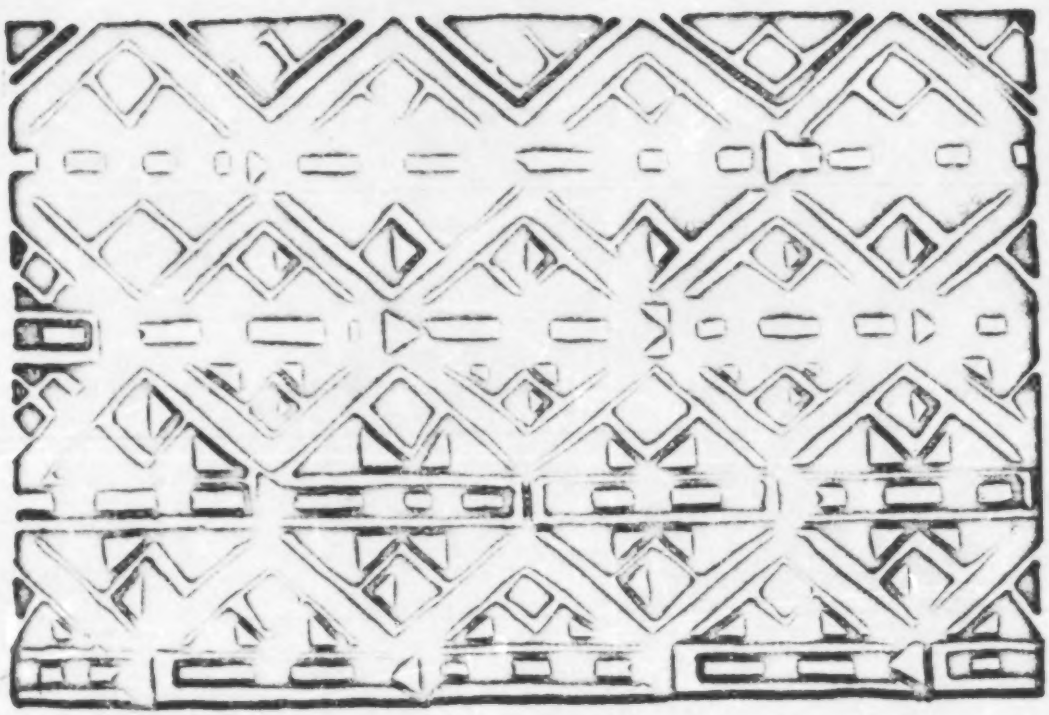
The fact that 21 percent of the faculty now have a doctorate indicates a continuation of an upward trend in degrees held by community college faculty. Chemistry and physics are the only other science disciplines to have a higher percentage of doctorate holders on their faculty. Doctorate holders were fairly evenly distributed between large and small schools, public and private, and regionally.

Curriculum, however, is not dictated by the degree attainment of the faculty. Earlier assertions (Kulik et al., 1973) that lack of doctorate holders would limit two-year college curricula seem unfounded, since private colleges which tended to have more limited curriculums, had a similar percentage of doctorate holders on their faculties.

The fact that over 50 percent of the instructors would like better students is not surprising, but answers to the problem are hard to find. That 39.2 percent wanted smaller classes and more release time is surely the type of data that make faculty unionization advocates smile. Current financial pressures may make these goals unattainable, at least for now.

Although only 18.2 percent of the psychology respondents wanting more readers and paraprofessional aides seems like a small group, it should be noted these services are available in very few schools (readers found in 15.4%; aides in 14.0%). Compared to the supply, the demand is quite high, and demand may increase as these assistants become more widely accepted and used.

A similar situation exists with laboratories. Although few courses (14.7%) used any laboratory experiments, 21.7 percent of the faculty would like better lab facilities. This may be the first indication towards the inclusion of more lab work in psychology courses.



PART V

SUMMARY AND RECOMMENDATIONS

This monograph has presented an overall picture of curriculum and instructional practices in two-year colleges in the United States. We have found that virtually every two-year college offers at least one course in psychology, and that the most frequently offered courses are general, developmental, social/industrial, abnormal, and personality/adjustment. Psychology offerings account for six percent of all two-year college science sections. The instructional practices employed by psychology faculty are quite similar to their social science colleagues, except that they are most likely to use objective tests as a primary evaluation tool.

The general psychology course, which accounts for 56 percent of all psychology sections, continues to be among the most popular courses offered

within the two-year colleges. However, there appears to be growth in psychology department offerings as well as in the number of students enrolling in these courses. This growth is a function not only of the tremendous growth within the nation's system of two-year colleges, but also parallels a similar growth in science enrollments in general.

Our search of the literature, together with our findings from the studies of curriculum and instruction, suggest that some areas merit further study and research as they will greatly influence the future trends in psychology education. One such area for further study is the determination of instructional practices and styles that are most effective for different student groups. This is not a new question, but it certainly increases in importance when one makes educational recommendations within the two-year college context. The idea of instructional modules directed towards different student groups should also be explored.

Because so many students take introductory or general psychology in two-year colleges, the content and structure of these courses needs special attention. What competencies should this course develop? In what ways must the student be able to demonstrate competencies? How should the first course be structured? Should student personal adjustment be included as a course goal? If one assumes that a large percentage of students in these courses take no further course work in psychology, then the concepts discussed, the attitudes towards psychology developed, and the misconceptions about psychology left untouched are likely to remain with the students throughout adulthood.

It is because of the large numbers of individuals who will form their attitudes and opinions about psychology while they attend two-year colleges that the American Psychological Association needs to take a more active role in two-year college education. This involves taking a more direct interest in the students and their studies at this level of education and involving the faculty of two-year colleges more directly in the Association.

These are certainly not the only recommendations stemming from this study, as other suggestions are noted in the discussion section of each chapter. These suggestions should result in further investigation and positive changes in two-year college psychology education.

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APPENDIX A

Region 1 NORTHEAST

Connecticut

Greater Hartford
Mitchell
Quinebaug

Massachusetts

Bay Path
Bunker Hill
Mt. Wachusett

Maine

University of Maine/
Augusta

New Hampshire

New Hampshire Tech.
White Pines

New York

Cayuga County
Genesee
Hudson Valley
North Country

Vermont

Champlain
Vermont Col. of
Norwich U.

Region 2 MIDDLE STATES

Delaware

Delaware Tech. & C.C./
Terry Campus
Goldey Beacom

Maryland

Dundalk
Hagerstown
Harford
Howard
Villa Julie

New Jersey

Atlantic
Middlesex County

Pennsylvania

Allegheny County/Boyce Campus
Delaware County
Harcum
Keystone
Northampton County
Northeastern Christian

West Virginia

West Virginia Northern
Potomac State

Region 3 SOUTH

Alabama

James Faulkner State
John C. Calhoun State
Lurleen B. Wallace State
Northwest Alabama State

Arkansas

Central Baptist
Mississippi County
Westark

Florida

Brevard
Edison
Florida
Palm Beach
Seminole
Valencia

Georgia

Atlanta
Bainbridge
Clayton
Floyd
Georgia Military
Middle Georgia
South Georgia

Kentucky

Southeast

Mississippi

Itawamba
Mary Holmes
Mississippi Gulf Coast/
  Jefferson Davis Campus
Pearl River
Southwest Mississippi
Wood

North Carolina

Chowan College
Coastal Carolina
Edgecombe Tech.
Halifax City Tech.
Lenoir
Richmond Tech.
Roanoke-Chowan Tech.
Wake Tech.

South Carolina

Greenville Tech.
University of South Carolina/
  Lancaster

Tennessee

Jackson State
Martin
Morristown
Shelby State

Texas

Angelina
Lamar University/Orange Branch
San Antonio
Vernon Regional
Weatherford

Virginia

Central Virginia
Northern Va./Alexandria
New River
Southern Seminary
Tidewater
Thomas Nelson
Wytheville

Region 4 MIDWEST

Illinois

Central YMCA
Danville
Highland
Kishwaukee
Lincoln Land
Oakton
Waubonsee
William Rainey Harper

Iowa

Clinton
Hawkeye Institute of Technology
Indian Hills
Iowa Lakes
Marshalltown
Southeastern

Michigan

Bay de Noc
Delta
Kalamazoo Valley
Kirtland
Monroe County
Oakland
Suomi

Minnesota

Austin
North Hennepin
Northland
University of Minnesota Tech.
Willmar

Missouri

St Paul's
Three Rivers

Nebraska

Metropolitan Tech.
Platte Tech.

Ohio

Edison State
Loraine County
Northwest Tech.
Shawnee State
Sinclair
Univ. of Toledo Comm. & Tech.

Wisconsin

District One Tech.
Lakeshore Tech.
Milwaukee Area Tech.
Univ. Center System/Sheboygan
Western Wisconsin Tech.

Region 5 MOUNTAIN PLAIN

Colorado

Arapahoe
Community Col. of Denver
Auraria Campus
Morgan
Northeastern

Kansas

Barton County
Central
Coffeyville
Hesston
St. John's

Montana

Miles

North Dakota

North Dakota State
School of Science

Oklahoma

Connors State
Hillsdale Free Will Baptist
Northern Oklahoma
South Oklahoma City
St. Gregory's

South Dakota

Presentation

Utah

College of Eastern Utah
Utah Tech.

Wyoming

Central Wyoming

Region 6 WEST

Alaska

Ketchikan

Arizona

Cochise
Pima

California

American River
Butte
Citrus
College of San Mateo
College of the Desert
College of the Sequoias
Fresno City College
Hartnell
Lassen
Los Angeles Pierce
Mendocino
Merced
Mt. San Jacinto
Saddleback
San Bernardino Valley
San Diego Mesa
Santa Rosa

Nevada

Clark County

Oregon

Chemeketa
Mt. Hood
Umpqua

Washington

Green River
Lower Columbia
Peninsula
South Seattle

480-006

Center for the Study of Community Colleges

INSTRUCTOR SURVEY

Your college is participating in a nationwide study conducted by the Center for the Study of Community Colleges under a grant from the National Science Foundation. The study is concerned with the role of the sciences and technologies in two-year colleges — curriculum, instructional practices and course activities.

The survey asks questions about one of your classes offered last fall. The information gathered will help inform groups making policy affecting the sciences. All information gathered is treated as confidential and at no time will your answers be singled out. Our concern is with aggregate instructional practices as discerned in a national sample.

We recognize that the survey is time-consuming and we appreciate your efforts in completing it. Thank you very much.

1a. Your college's class schedule indicated that in Fall, 1977 you were teaching:

_____ (Course) 11-13 _____ (Section)

If this class was assigned to a different instructor, please return this survey to your campus facilitator to give to the person who taught this class.

If the class was not taught, please give us the reason why, and then return the uncompleted survey form in the accompanying envelope.

b. Class was not taught because: (explain briefly) _____

_____

_____

Please answer the questions in relation to the specified class.

2. Approximately how many students were initially enrolled in this class?

Males _____ 14-16

Females _____ 17-19

3. Approximately how many students completed this course and received grades? (Do not include withdrawals or incompletes.)

Males _____ 20-22

Females _____ 23-25

4. Check each of the items below that you believe properly describes this course:

a. Parallel or equivalent to a lower division college level course at transfer institutions . . . . . ☐ 1 — 26

b. Designed for transfer students majoring in one of the natural resources fields (e.g., agriculture, forestry) or an allied health field (e.g., nursing, dental hygiene, etc.) . . . . . ☐ 2

c. Designed for transfer students majoring in one of the physical or biological sciences, engineering, mathematics, or the health sciences (e.g., pre-medicine, pre-dentistry) . . . . . ☐ 3

d. Designed for transfer students majoring in a non-science area . . . ☐ 4

e. Designed for occupational students in an allied health area . . . . ☐ 5

f. Designed for occupational students in a science technology or engineering technology area . . . . . ☐ 6

g. Designed as a high school make up or remedial course . . . . . ☐ 7

h. Designed as a general education course for non-transfer and non-occupational students . . . . . ☐ 8

i. Designed for further education or personal upgrading of adult students . . . . . ☐ 9

j. Other *(please specify)*:_____ ☐ 0

5a. Instructors may desire many qualities for their students. Please select the one quality in the following list of four that you most wanted your students to achieve in the specified course.

1) Understand/appreciate interrelationships of science and technology with society . . . . . ☐ 1 — 27

2) Be able to understand scientific research literature . . . . . ☐ 2

3) Apply principles learned in course to solve qualitative and/or quantitative problems . . . . . ☐ 3

4) Develop proficiency in laboratory methods and techniques of the discipline . . . . . ☐ 4

b. Of the four qualities listed below, which one did you most want your students to achieve?

1) Relate knowledge acquired in class to real world systems and problems . . . . . ☐ 1 — 28

2) Understand the principles, concepts, and terminology of the discipline . ☐ 2

3) Develop appreciation/understanding of scientific method . . . . ☐ 3

4) Gain "hands-on" or field experience in applied practice . . . . . ☐ 4

c. And from this list, which one did you most want your students to achieve in the specified class.

1) Learn to use tools of research in the sciences . . . . . ☐ 1 — 29

2) Gain qualities of mind useful in further education . . . . . ☐ 2

3) Understand self . . . . . ☐ 3

4) Develop the ability to think critically . . . . . ☐ 4

6a. Were there prerequisite requirements for this course? Yes ☐ 1 No ☐ 2 — 30

b. IF YES: Which of the following were required? (CHECK AS MANY AS APPLY)

1) Prior course in the same discipline taken in high school ☐ 1 . . college ☐ 7 — 31

2) Prior course in any science taken in high school ☐ 2 . . college ☐ 8

3) Prior course in mathematics taken in high school ☐ 3 . . college ☐ 9

4) Declared science or technology major . . . . . ☐ 4

5) Achieved a specified score on entrance examination . ☐ 5

6) Other *(please specify)*:_____ ☐ 6

7. **Over the entire term, what percentage of class time is devoted to each of the following:**

a. Your own lectures	_____ %	32/33
b. Guest lecturers	_____ %	34/35
c. Student verbal presentations	_____ %	36/37
d. Class discussion	_____ %	38/39
e. Viewing and/or listening to film or taped media	_____ %	40/41
f. Simulation/gaming	_____ %	42/43
g. Quizzes/examinations	_____ %	44/45
h. Field trips	_____ %	46/47
i. Lecture/demonstration experiments	_____ %	48/49
j. Laboratory experiments by students	_____ %	50/51
k. Laboratory practical examinations and quizzes	_____ %	52/53
l. Other *(please specify)*: _____		
_____	_____ %	54/55

Please add percentages to make sure they agree with total TOTAL: 100 %

8. **How frequently were each of the following instructional media used in this class?**

Also check last box if you or any member of your faculty developed any of the designated media for this course ↓

	Frequently used	Occasionally used	Never used	Developed by self or other faculty member	
a. Films	☐ 1	☐ 2	☐ 3	☐ 4	56
b. Single concept film loops	☐ 1	☐ 2	☐ 3	☐ 4	57
c. Filmstrips	☐ 1	☐ 2	☐ 3	☐ 4	58
d. Slides	☐ 1	☐ 2	☐ 3	☐ 4	59
e. Audiotape/slide/film combinations	☐ 1	☐ 2	☐ 3	☐ 4	60
f. Overhead projected transparencies	☐ 1	☐ 2	☐ 3	☐ 4	61
g. Audiotapes, cassettes, records	☐ 1	☐ 2	☐ 3	☐ 4	62
h. Videotapes	☐ 1	☐ 2	☐ 3	☐ 4	63
i. Television (broadcast/closed circuit)	☐ 1	☐ 2	☐ 3	☐ 4	64
j. Maps, charts, illustrations, displays	☐ 1	☐ 2	☐ 3	☐ 4	65
k. Three dimensional models	☐ 1	☐ 2	☐ 3	☐ 4	66
l. Scientific instruments	☐ 1	☐ 2	☐ 3	☐ 4	67
m. Natural preserved or living specimens	☐ 1	☐ 2	☐ 3	☐ 4	68
n. Lecture or demonstration experiments involving chemical reagents or physical apparatus	☐ 1	☐ 2	☐ 3	☐ 4	69
o. Other *(please specify)*: _____	☐ 1	☐ 2	☐ 3	☐ 4	70

9. **Which of the following materials were used in this class? CHECK EACH TYPE USED. THEN, FOR EACH TYPE USED, PLEASE ANSWER ITEMS A-D.**

	A.	B.			C.		D.			
							How much say did you have in the selection of these materials?			
Check Materials Used	How many pages in total were students required to read?	How satisfied were you with these materials? Well-satisfied	Would like to change them	Definitely intend changing them	Did you prepare these materials? Yes	No	Total say	Selected them but had to verify with a chairperson or administrator	Was member of a group that selected them	Someone else selected them
☐ 1 Textbooks	_____ 13-15	16 ☐ 1	☐ 2	☐ 3	17 ☐ 1	☐ 2	18 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 2 Laboratory materials and workbooks	_____ 19-21	22 ☐ 1	☐ 2	☐ 3	23 ☐ 1	☐ 2	24 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 3 Collections of readings	_____ 25-27	28 ☐ 1	☐ 2	☐ 3	29 ☐ 1	☐ 2	30 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 4 Reference books	_____ 31-33	34 ☐ 1	☐ 2	☐ 3	35 ☐ 1	☐ 2	36 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 5 Journal and/or magazine articles	_____ 37-39	40 ☐ 1	☐ 2	☐ 3	41 ☐ 1	☐ 2	42 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 6 Newspapers	_____ 43-45	46 ☐ 1	☐ 2	☐ 3	47 ☐ 1	☐ 2	48 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 7 Syllabi and handout materials	_____ 49-51	52 ☐ 1	☐ 2	☐ 3	53 ☐ 1	☐ 2	54 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 8 Problem books	_____ 55-57	58 ☐ 1	☐ 2	☐ 3	59 ☐ 1	☐ 2	60 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 9 Other *(please specify)* _____	_____ 61-63	64 ☐ 1	☐ 2	☐ 3	65 ☐ 1	☐ 2	66 ☐ 1	☐ 2	☐ 3	☐ 4

10. **Please indicate the emphasis given to each of the following student activities in this class.**

	Not included in determining student's grade	Included but counted less than 25% toward grade	Counted 25% or more toward grade	
a. Papers written outside of class	☐ 1	☐ 2	☐ 3	67
b. Papers written in class	☐ 1	☐ 2	☐ 3	68
c. Quick-score/objective tests/exams	☐ 1	☐ 2	☐ 3	69
d. Essay tests/exams	☐ 1	☐ 2	☐ 3	70
e. Field reports	☐ 1	☐ 2	☐ 3	71
f. Oral recitations	☐ 1	☐ 2	☐ 3	72
g. Workbook completion	☐ 1	☐ 2	☐ 3	73
h. Regular class attendance	☐ 1	☐ 2	☐ 3	74
i. Participation in class discussions	☐ 1	☐ 2	☐ 3	75
j. Individual discussions with instructor	☐ 1	☐ 2	☐ 3	76
k. Research reports	☐ 1	☐ 2	☐ 3	77
l. Non-written projects	☐ 1	☐ 2	☐ 3	78
m. Homework	☐ 1	☐ 2	☐ 3	79
n. Laboratory reports	☐ 1	☐ 2	☐ 3	80
o. Laboratory unknowns and/or practical exams (quantitative and qualitative)	☐ 1	☐ 2	☐ 3	12
p. Problem sets	☐ 1	☐ 2	☐ 3	13
q. Other *(please specify)*:_____	☐ 1	☐ 2	☐ 3	14

11. **Examinations or quizzes given to students may ask them to demonstrate various abilities. Please indicate the importance of each of these abilities in the tests you gave in this course. (CHECK ONE BOX FOR EACH ITEM)**

	Very important	Somewhat important	Not important	
a. Mastery of a skill	☐ 1	☐ 2	☐ 3	15
b. Acquaintance with concepts of the discipline	☐ 1	☐ 2	☐ 3	16
c. Recall of specific information	☐ 1	☐ 2	☐ 3	17
d. Understanding the significance of certain works, events, phenomena, and experiments	☐ 1	☐ 2	☐ 3	18
e. Ability to synthesize course content	☐ 1	☐ 2	☐ 3	19
f. Relationship of concepts to student's own values	☐ 1	☐ 2	☐ 3	20
g. Other *(please specify)*:_____	☐ 1	☐ 2	☐ 3	21

12. **What was the relative emphasis given to each type of question in written quizzes and examinations? (PLEASE RESPOND BY CHECKING ONE OF THE THREE BOXES FOR EACH ITEM.)**

	Frequently used	Seldom used	Never used	
a. Multiple response (including multiple choice and true/false)	☐ 1	☐ 2	☐ 3	22
b. Completion	☐ 1	☐ 2	☐ 3	23
c. Essay	☐ 1	☐ 2	☐ 3	24
d. Solution of mathematical type problems where the work must be shown	☐ 1	☐ 2	☐ 3	25
e. Construction of graphs, diagrams, chemical type equations, etc.	☐ 1	☐ 2	☐ 3	26
f. Derivation of a mathematical relationship	☐ 1	☐ 2	☐ 3	27
g. Other *(please specify)*:_____	☐ 1	☐ 2	☐ 3	28

13. **What grading practice did you employ in this class?** 29

- ABCDF . . . . . ☐ 1
- ABCD/No credit . . ☐ 2
- ABC/No credit . . ☐ 3
- Pass/Fail . . . . ☐ 4
- Pass/No credit . . ☐ 5
- No grades issued . . ☐ 6
- Other _____ ☐ 7
  (please specify)

14. **For each of the following out-of-class activities, please indicate if attendance was required, recommended or neither.**

	Attendance required for course credit	Attendance recommended but not required	Neither required nor recommended	
a. On-campus educational type films	☐ 1	☐ 2	☐ 3	30
b. Other films	☐ 1	☐ 2	☐ 3	31
c. Field trips to industrial plants, research laboratories	☐ 1	☐ 2	☐ 3	32
d. Television programs	☐ 1	☐ 2	☐ 3	33
e. Museums/exhibits/zoos/arboretums	☐ 1	☐ 2	☐ 3	34
f. Volunteer service on an environmental project .	☐ 1	☐ 2	☐ 3	35
g. Outside lectures	☐ 1	☐ 2	☐ 3	36
h. Field trips to natural formation or ecological area	☐ 1	☐ 2	☐ 3	37
i. Volunteer service on education/ community project	☐ 1	☐ 2	☐ 3	38
j. Tutoring	☐ 1	☐ 2	☐ 3	39
k. Other *(please specify)*:_____	☐ 1	☐ 2	☐ 3	40

15a. **Was this class conducted as an interdisciplinary course?** 41

- Yes . . . . . ☐ 1
- No . . . . . ☐ 2

b. **IF YES: Which other disciplines were involved?**_____
(please specify)

_____ 42-

_____ 43-

16. **Were instructors from other disciplines involved . . .**

	YES	NO	
. . . in course planning?	☐ 1	☐ 2	44
. . . in team teaching?	☐ 1	☐ 2	45
. . . in offering guest lectures?	☐ 1	☐ 2	46

17a. Which of these types of assistance were available to you last term? CHECK AS MANY AS APPLY.

b. Which did you utilize? CHECK AS MANY AS APPLY.

	a. Assistance was available to me in the following areas	b. Utilized
a. Clerical help	47. ☐ 1	48. ☐ 1
b. Test-scoring facilities	☐ 2	☐ 2
c. Tutors	☐ 3	☐ 3
d. Readers	☐ 4	☐ 4
e. Paraprofessional aides/instructional assistants	☐ 5	☐ 5
f. Media production facilities/assistance	☐ 6	☐ 6
g. Library/bibliographical assistance	☐ 7	☐ 7
h. Laboratory assistants	☐ 8	☐ 8
i. Other *(please specify)*:_____	☐ 9	☐ 9

18. Although this course may have been very effective, what would it take to have made it better? CHECK AS MANY AS APPLY.

a. More freedom to choose materials	☐ 1	49
b. More interaction with colleagues or administrators	☐ 2	
c. Less interference from colleagues or administrators	☐ 3	
d. Larger class (more students)	☐ 4	
e. Smaller class	☐ 5	
f. More reader/paraprofessional aides	☐ 6	
g. More clerical assistance	☐ 7	
h. Availability of more media or instructional materials	☐ 8	
i. Stricter prerequisites for admission to class	☐ 9	
j. Fewer or no prerequisites for admission to class	☐ 1	50
k. Changed course description	☐ 2	
l. Instructor release time to develop course and/or material	☐ 3	
m. Different goals and objectives	☐ 4	
n. Professional development opportunities for instructors	☐ 5	
o. Better laboratory facilities	☐ 6	
p. Students better prepared to handle course requirements	☐ 7	
q. Other *(please specify)*:_____	☐ 8	

Now, just a few questions about you . . .

19. How many years have you taught in any two-year college? 51

- a. Less than one year . . . . . ☐ 1
- b. 1-2 years . . . . . ☐ 2
- c. 3-4 years . . . . . ☐ 3
- d. 5-10 years . . . . . ☐ 4
- e. 11-20 years . . . . . ☐ 5
- f. Over 20 years . . . . . ☐ 6

20. At this college are you considered to be a: 52

- a. Full-time faculty member . . . . . ☐ 1
- b. Part-time faculty member . . . . . ☐ 2
- c. Department or division chairperson . . . ☐ 3
- d. Administrator . . . . . ☐ 4
- e. Other *(please specify):*

  _____ . . . ☐ 5

21a. Are you currently employed in a research or industrial position directly related to the discipline of this course? 53

Yes ☐ 1
No ☐ 2

b. IF YES: For how many years?_____ 54/55

c. If previously you had been employed in a related industry or research organization, please indicate the number of years:_____ 56/57

22. What is the highest degree you presently hold? 58

- a. Bachelor's . . . . . ☐ 1
- b. Master's . . . . . ☐ 2
- c. Doctorate . . . . . ☐ 3

IMPORTANT INSTRUCTIONS

Thank you for taking the time to complete this survey. Please seal the completed questionnaire in the envelope which is addressed to the project facilitator on your campus and return it to that person. After collecting the forms from all participants, the facilitator will forward the sealed envelopes to the Center.

We appreciate your prompt attention and participation in this important survey for the National Science Foundation.

Arthur M. Cohen
Principal Investigator

Florence B. Brawer
Research Director

ERIC Clearinghouse for Junior Colleges
96 Powell Library Building
University of California
Los Angeles, California 90024

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